

PROCEEDINGS
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RECORDS OF SPECIES OF THE GENUS *ERYTHRONEURA* (HOMOPTERA; EUPTERYGIDAE) WITH DESCRIPTIONS OF NEW FORMS.

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The material upon which the following records are based is in collections of Dr. E. D. Ball, and of the State College of Iowa, the latter received through the kindness of Dr. Carl J. Drake. The types of the new forms described with the exception of *E. pyra* which is in the collection of the State College, are in the private collection of Dr. Ball. This paper is by no means a catalog of the two collections involved, as only records are cited that add to knowledge of distribution of the species.

Recently there has been unusual activity in publishing upon the genus *Erythroneura*, hence for convenience a bibliography is appended of papers appearing since the writer's "Key" in 1920 (Trans. Am. Ent. Soc. 46, pp. 267-321, Pl. 12).

Genus *Erythroneura* Fitch.

E. vulnerata var. *vulnerata* Fitch, fulvous form.—Ames, Iowa, July 1, 1895; Phoenix, Ariz., May, 1897.

E. vulnerata var. *niger* Gillette.—Onaga, Kans., April 4, 1898; Galena, Kans., Columbus, Ohio.

E. vulnerata var. *nigerrima* McAtee.—N. Colo., March 4, 1898; Holly, Colo., Sept. 8, 1898.

E. obliqua var. *obliqua* Say, red form.—Sullivan, Wis., Sept. 22, 1917; Portage, N. Y., May 30, 1888, E. P. Van Duzee.

E. obliqua var. *obliqua* Say, yellow form.—Ames, Iowa, June, August, Sept.; Lancaster, N. Y., June 4, 1889, E. P. Van Duzee.

E. obliqua var. *dorsalis* Gillette, red form.—Ames, Iowa, Aug., Sept.; Kansas City, Mo., Dec. 30, 1901; Sullivan, Wis., Sept. 22, 1917.

E. obliqua var. *dorsalis* Gillette, dark form.—Ames, Iowa, April; Buffalo, N. Y., May 11, 1888; Ridgeway, Ont., May 21, 1886, E. P. Van Duzee.

E. obliqua var. *stolata* McAtee.—Ames, Iowa.

E. obliqua var. *noevus* Gillette, red and yellow forms.—Ames, Iowa.

E. obliqua var. *fumida* Gillette, red form.—Ames, Iowa, April 24; Boston, Mass., Aug. 31, 1919.

E. obliqua var. *electa* McAtee.—Ames, Iowa, Aug. 13, 1895; Sullivan, Wis., Sept. 12, 1917.

E. obliqua var. *parma* McAtee.—Ames, Iowa, Sept. 14, 1895, C. W. M.

***Erythroneura obliqua* var. *amabilis*, new variety.**

Head and thorax pale yellow, with the usual two nearly percurrent vittae a deeper, more golden yellow; tegmina carmine from base to near crossveins, nearly hyaline posteriorly, except for the crossveins, longitudinal veins near them, and a little of the adjacent membrane which are golden yellow; underparts yellow, abdomen except genitalia dark. Length, 2.75 mm.

Holotype, ♀, Md. (near Washington, D. C.), June 1, 1924, E. D. Ball.

E. rubroscuta Gillette.—Berwick, Iowa, Sept. 28, 1895, C. W. M.

E. bipunctata Gillette, red form.—Ft. Yuma, Ariz., July 20, H. G. Hubbard.

***Erythroneura bipunctata* var. *abluta*, new variety.**

Differs from *E. bipunctata* var. *bipunctata*, yellow form, principally in lacking black spots in basal angles of scutellum. General color pale greenish, the vertex more yellowish, the apical cells more hyaline. The two round black spots on vertex are distinct. Length 2.5 mm.

Holotype ♀ and allotype, and one other specimen not entirely typical, Indio, Calif., June 19, 1909, E. D. Ball.

E. dentata Gillette, red form.—Salinas, Calif., June 25, 1908; Stanford University, June 21, 1908.

E. dentata Gillette, yellow form.—Same data as for the red form, and in addition, Visalia, Calif., June 11, 1909; Watsonville, Calif., Aug. 9, 1912; Pasadena, Calif., June 17, 1908; Stockton, Calif., June 10, 1909; and Salt Lake, Utah, June 4, 1910.

E. abolla var. *abolla* McAtee, red form.—Ames, Iowa, July 21, 1919.

***Erythroneura inornata*, new species.**

Runs to group 3 in my 1920 paper, and in that group to *abolla*, from which it differs in male genitalia. The outer clasper as seen from side is abruptly narrowed near base and of about the same width thereafter to apex, while in *abolla* the base is narrowed gradually not reducing to the width of apical part until about the middle. Ground color of head and thorax pale yellow, two brownish dots on disc of vertex, median line of vertex posteriorly and eyes dark; disk of pronotum and tegmina pale greenish; face and legs yellow; abdomen except edgings and outer claspers of genitalia, black. Length, 3.25 mm.

Holotype male, Ward, Colorado, August, 1899, E. D. Ball.

***Erythroneura aprica*, new species.**

Belongs to Group 3. Ground color of head and thorax whitish, a round

dot on tip of vertex, and extreme apex of scutellum black; two trapezoidal marks on vertex, two larger ones very similar in shape on pronotum, and most of scutellum golden yellow; basal two-thirds of clavus except inner angle, spot near apex of clavus, vitta on corium bordering middle part of clavus, and spot on costa anterior to that of the same color; large blotch between third sector and claval suture anterior to crossveins, and a few smaller irregular blotches anterior and exterior to it, carmine; apex of tegmen from region of crossveins fumose. Lower parts pale yellow, beak a little reddish, black tipped, abdomen somewhat darkened above; ovipositor black-tipped. Length, 2.5 mm.

Holotype ♀, Santa Rita Mts., Ariz., July, F. H. Snow.

E. tecta var. *tecta* McAtee.—Osceola, Wis., Sept. 15, 1917.

E. tecta var. *carbonata* McAtee.—Husted, N. J., July 23, E. L. Dickerson.

E. aclys McAtee.—Onaga, Kans., April 4, 1898.

E. illinoensis var. *illinoensis* Gillette, red form.—Kansas City, Mo., May 1, Dec. 1, 30, 1901.

E. hartii Gillette.—Ohio, October.

E. scutelleris Gillette, red form.—Onaga, Kans., April 4, 1898; Ohio, October.

***Erythroneura pyra*, new species.**

Vertex, pronotum, and scutellum ivory colored without definite markings; tegmina milky white with the following scarlet markings: nearly all of basal third of clavus, a band near apex of clavus, and a broad vitta between claval suture and costal plaque. The common pattern of the disk of tegmina is a truncate triangular figure, almost straight across distal end (the base), and jagged on the sides, in scarlet, enclosing a somewhat pear-shaped area of the ground color on middle of the clavi. In the type the vittae are orange in bases of clavi, but this may be due to fading. The costal plaque is chalky with a dark spot at posterior end, there is a dash of red on outer crossvein at costa, and a dusky spot in base of fourth apical cell. Underparts pale yellowish.

Holotype ♂, Berwick, Iowa, Sept. 28, 1895, C. W. M.

This species belongs in Group 4 and suggests *E. harti* in appearance; the pale saddle spot is quite different, however, both in shape and position.

E. maculata var. *maculata* Gillette, red form.—Riverton, N. J., Aug. 11, E. L. Dickerson; Boston, Mass., Aug. 31, 1919; Fort Collins, Colo., May 11, 1899; Osceola, Wis., July 20, 1917.

E. maculata var. *maculata* Gillette, yellow form.—Ames, Iowa, Aug. 10, 1897, May 11, 1898; Riverton, N. J., Aug. 11, E. R. Dickerson; Cranberry Lake, N. Y., Aug. 5, 1920, H. Osborn; Stanford University, Calif., June 21, 1908.

E. maculata var. *begemina* McAtee.—Ames, Iowa, Aug. 16, 1895; Spring Green, Wis., Aug. 1, 1917.

E. maculata var. *gemina* McAtee.—Ames, Iowa, Aug. 7, 1895.

***Erythroneura ligata* var. *caetra*, new variety.**

The basal triangles and two discal spots of scutellum are black; the sides of pronotum blackish anteriorly and exteriorly, reddish posteriorly; apex

of scutellum reddish; tegminal vittae sanguineous, a little more diffuse than usual in the species; apical cells with an oblique dusky band from base of fourth to apex of second cells. Length, 3 mm.

Holotype ♀, Salinas, Calif., April 26, 1908, E. D. Ball.

E. vitis var. *vitis* Harris, red and yellow forms.—Ames, Iowa.

E. tricincta var. *integra* McAtee.—Kansas City, Mo., Dec. 30, 1901.

E. comes var. *vitifex* Fitch, red form.—Fort Collins, Colo., Sept. 8, 1898, May 12, 1899; Saanich Dist., B. C., May 3, 1918, W. Downes.

E. comes var. *vitifex* Fitch, yellow form.—Ames, Iowa, July 1, 1895.

E. comes var. *elegans* McAtee.—Kansas City, Mo., May 3, 1901; Pikes Peak, Colo., T. D. A. Cockerell.

E. comes var. *rubra* Gillette.—Sullivan, Wis., Sept. 22, 1917.

E. comes var. *reflecta* McAtee.—Ames, Iowa, July 26, Aug. 7, 1895; Onaga, Kans., April 4, 1898.

E. comes var. *accepta* McAtee, yellow form.—Ames, Iowa, July 3, 1895.

E. comes var. *ziczac* Walsh, red form.—Ames, Iowa, Sept. 25, 1889, April 29, July 15, 1896.

E. comes var. *ziczac* Walsh, yellow form.—Hill City, Kansas.

E. comes var. *comes* Say, red form.—Ames, Iowa, July 1, 1895.

E. comes var. *comes* Say, yellow form.—Lancaster, N. Y., June 4, 1889, E. P. Van Duzee.

E. lunata McAtee.—Onaga, Kans. Has very little red markings, but agrees otherwise with the original description.

E. comes var. *coloradoensis* Gillette.—Has a yellow marked form, as exemplified by a specimen labelled Colo., No. 2733; and a form without color markings, but the black spots as usual, Colo., No. 2890.

BIBLIOGRAPHY.

McATEE, W. L.

Notes on a collection of Erythroneura and Hymetta (Eupterygidae), chiefly from Illinois, with Descriptions of new forms.

Bul. Ill. Nat. Hist. Surv., 15, Art II, April, 1924, pp. 39-44.

Three new species, 4 new varieties of Erythroneura.

Notes on Eupterygid leaf-hoppers with description of a few forms (Homoptera).

Florida Ent. In press.

One new species, 5 new varieties of Erythroneura.

ROBINSON, W.

Some new species of Erythroneura (Homoptera, Cicadellidae).

Can. Ent. 56, No. 3, March, 1924, pp. 58-62.

Fourteen new species; 1 new variety.

Additional new species of Erythroneura (Homoptera, Cicadellidae).

Can. Ent. 56, No. 7, July, 1924, pp. 154-157.

Ten new species; 1 new variety.

VAN DUZEE, E. P.

The genus Erythroneura in California (Homoptera).

Proc. Calif. Ac. Sci., Fourth Series, 13, No. 13, pp. 231-236, March 18, 1924.

Four new species; 1 new subspecies.